of the product, and all parts must be readily accessible for cleaning. The type of sampler and the sampling procedure shall be as approved by the Administrator.

§ 58.228 Dump hoppers, screens, mixers and conveyors.

The product contact surfaces of dump hoppers, screens, mixers and conveyors which are used in the process of transferring dry products from bulk containers to fillers for small packages or containers, shall be of stainless or equally corrosion resistant material and designed to prevent contamination. All parts should be accessible for cleaning. The dump hoppers shall be of such height above floor level as to prevent foreign material or spilled product from entering the hopper.

§ 58.229 Filler and packaging equipment.

All filling and packaging equipment shall be of sanitary construction and all parts, including valves and filler heads accessible for cleaning. New or replacement equipment should comply with the 3–A Sanitary Standards for equipment for Packaging Dry Milk and Dry Milk Products.

§ 58.230 Heavy duty vacuum cleaners.

Each plant handling dry milk products shall be equipped with a heavy duty industrial vacuum cleaner. The vacuum cleaner shall be of a type that has a collector or disposable bag which will not recontaminate the atmosphere of the processing and packaging areas. Regular scheduling shall be established for its use in vacuuming applicable areas.

Quality Specifications for Raw Materials

§ 58.231 General.

All raw materials received at the drying plant shall meet the following quality specifications.

§ 58.232 Milk.

Raw milk shall meet the requirements as outlined in §§ 58.132 through 58.138 and, unless processed within two hours after being received, it shall be cooled to and held at a temperature of 45 °F. or lower until processed.

§ 58.233 Skim milk.

The skim milk shall be separated from whole milk meeting the requirements as outlined in §§ 58.132 through 58.138, and unless processed immediately, it shall be cooled to and maintained at a temperature of 45 °F. or lower from the time of separating until the time of processing.

§ 58.234 Buttermilk.

Buttermilk for drying as dry buttermilk or dry buttermilk product shall be fresh and derived from the churning of butter, with or without the addition of harmless lactic culture. No preservative, neutralizing agent or other chemical may be added. Fluid buttermilk, unless cultured, shall be held at 45 °F or lower unless processed within 2 hours.

[56 FR 33855, July 24, 1991]

§ 58.235 Modified dry milk products.

Dry milk products to which approved neutralizing agents or chemicals have been added or constituents removed to alter their original characteristics for processing or usage shall come from products meeting the requirements of §§ 58.232, 58.233, or 58.234. These products shall meet the applicable labeling requirements.

Operations and Operating Procedures

§ 58.236 Pasteurization and heat treatment.

All milk and buttermilk used in the manufacture of dry milk products and modified dry milk products shall be pasteurized at the plant where dried, except that acidified buttermilk containing 40 percent or more solids may be transported to another plant for drying without repasteurization. Provided the condensed product is handled according to sanitary conditions approved by the Administrator.

(a) *Pasteurization.* (1) All milk or skim milk to be used in the manufacture of nonfat dry milk shall be pasteurized prior to condensing at a minimum temperature of 161 °F. for at least 15 seconds or its equivalent in

bacterial destruction. Condensed milk products made from pasteurized milk may be transported to a drying plant, provided that it shall be effectively repasteurized at the drying plant, prior to drying, at no less than 166 °F. for 15 seconds or its equivalent in bacterial destruction.

(2) All buttermilk to be used in the manufacture of dry buttermilk or dry buttermilk product shall be pasteurized prior to condensing at a temperature of 161 °F for 15 seconds or its equivalent in bacterial destruction.

(b) *Heat treatment—(1) High-heat.* The finished product shall not exceed 1.5 mg. undenatured whey protein nitrogen per gram of nonfat dry milk as classified in the U.S. Standards for Grades of Nonfat Dry Milk (Spray Process).

(2) *Medium-heat.* The finished product shall show undenatured whey protein nitrogen between the levels of ''high-heat'' and ''low-heat'' (1.51 to 5.99 mg.).

(3) *Low-heat.* The finished product shall show not less than 6.0 undenatured whey protein nitrogen per gram of non-fat dry milk as classified in the U.S. Standards for Grades of Nonfat Dry Milk (Spray Process).

[40 FR 47911, Oct. 10, 1975. Redesignated at 42 FR 32514, June 27, 1977, and further redesignated at 46 FR 63203, Dec. 31, 1981, as amended at 56 FR 33855, July 24, 1991]

§ 58.237 Condensed surge supply.

Surge tanks or balance tanks if used between the evaporators and dryer shall be used to hold only the minimum amount of condensed product necessary for a uniform flow to the dryers. Such tanks holding product at temperatures below 150 °F. shall be completely emptied and washed after each 4 hours of operation or less. Alternate tanks shall be provided to permit continuous operation during washing of tanks.

§ 58.238 Condensed storage tanks.

(a) Excess production of condensed product over that which the dryer will take continuously from the pans should be bypassed through a cooler into a storage tank at 50 °F. or lower and held at this temperature until used.

(b) Product cut-off points shall be made at least every 24 hours and the tank completely emptied, washed, and sanitized before reuse.

§ 58.239 Drying.

Each dryer should be operated to produce the highest quality dry product consistent with the most efficient operation. The dry products shall be removed from the drying chamber continuously during the drying process.

§ 58.240 Cooling dry products.

Prior to packaging and immediately following removal from the drying chamber the dry product shall be cooled to a temperature not exceeding 110 °F, however, if the product is to be held in a bulk bin the temperature should be reduced to approximately 90 °F but shall be not more than 110 °F.

§ 58.241 Packaging, repackaging and storage.

(a) *Containers.* Packages or containers used for the packaging of nonfat dry milk or other dry milk products shall be any clean, sound commercially accepted container or packaging material which will satisfactorily protect the contents through the regular channels of trade, without significant impairment of quality with respect to flavor, wholesomeness or moisture content under the normal conditions of handling. In no instance will containers which have previously been used for nonfood items, or food items which would be deleterious to the dairy product be allowed to be used for the bulk handling of dairy products.

(b) *Filling.* Empty containers shall be protected at all times from possible contamination and containers which are to be lined shall not be prepared more than one hour in advance of filling. Every precaution shall be taken during the filling operation to minimize product dust and spillage. When necessary a mechanical shaker shall be provided; the tapping or pounding of containers should be prohibited. The containers shall be closed immediately after filling and the exteriors shall be vacuumed or brushed when necessary to render them practically free of residual product before being transferred